Electronic Version
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Claims

[c1] A removable tub grip comprising:
a locking member comprising a plurality of teeth;
a first arm assembly mounted on the locking member;
a clamp assembly, attached to a portion of the locking member and in communication with the first arm assembly;
a second arm assembly mounted on the locking member; and
at least one locking plate mounted on the locking member and selectively engageable with the teeth of the locking member.

[c2] The removable tub grip of claim 1, further comprising a first spring, mounted on the locking member and in communication with the at least one locking plate, and wherein the first spring urges the at least one locking plate towards the first arm assembly.

[c3] The removable tub grip of claim 2 further comprising a mechanical stop, wherein the mechanical stop engages an upper portion of the at least one locking plate and, in combination with the first spring, urges the at least one locking plate to tilt, with respect to the length of the

locking member, so that a lower portion of the at least one locking plate moves towards the first arm assembly and into engagement with at least one of the plurality of teeth on the locking member.

[c4] A removable tub grip of claim 3 wherein the clamp assembly further comprises a lever and a cam.

[c5] The removable tub grip of claim 4 wherein the lever of the clamp assembly is coupled to the cam; and further wherein actuating the lever, urges the second arm assembly towards the first arm assembly.

[c6] The removable tub grip of claim 3 further comprising a locking plate release mechanism, the locking plate release mechanism comprises:
a release lever, and
a connector comprising:
a first end portion, and
a second end portion;
wherein the first end portion is coupled to the release lever and the second end portion is in communication with the at least one locking plate.

[c7] The removable tub grip of claim 6 wherein the locking plate release mechanism is coupled to the second arm assembly and further wherein moving the release lever

away from the second arm assembly disengages the locking plate from the at least one of the plurality of teeth of the locking member.

[c8] A removable tub grip comprising:
a locking member comprising a plurality of teeth;
a first arm assembly mounted on the locking member;
a second arm assembly mounted on the locking member; and
at least one locking plate mounted on the locking member and selectively engageable with the teeth on the locking member.

[c9] The removable tub grip of claim 8, further comprising a first spring, mounted on the locking member and in contact with the at least one locking plate, and
wherein the first spring urges the at least one locking plate towards the first arm assembly.

[c10] The removable tub grip of claim 9 further comprising a mechanical stop, wherein the mechanical stop engages an upper portion of the at least one locking plate and, in combination with the first spring, urges the at least one locking plate to tilt, with respect to the length of the locking member, so that a lower portion of the at least one locking plate moves towards the first arm assembly and into engagement with at least one of the teeth of the

locking member.

[c11] The removable tub grip of claim 10 wherein each of the plurality of teeth is defined by a first edge portion and a second edge portion, wherein the first and second edge portion intersect at the peak of the tooth to form an angle there between.

[c12] The removable tub grip of claim 11 wherein the angle between the first edge portion and the second edge portion is approximately 100 degrees.

[c13] The removable tub grip of claim 12 wherein the characteristic angle of the first edge portion is 70 degrees and the characteristic angle of the second edge portion is 30 degrees.

[c14] The removable tub grip of claim 10 further comprising a locking plate release mechanism, the locking plate release mechanism comprises:
a lever, and
a connector comprising:
a first end portion, and
a second end portion;
wherein the first end portion is coupled to the lever and the second end portion is in communication with the at least one locking plate.

[c15] The removable tub grip of claim 14 wherein the locking plate release mechanism is coupled to the second arm assembly and further wherein moving the lever away from the second arm assembly disengages the locking plate from the at least one of the teeth of the locking member.

[c16] A removable tub grip comprising:
at least one handle assembly;
a locking member comprising:
an upper surface,
a first series of teeth extend from the upper surface,
a lower surface,
a second series of teeth extending from the lower surface, and
an end portion;
a first arm assembly mounted on the locking member proximate to the end portion;
a clamp assembly, attached to the end portion of the locking member and in communication with the first arm assembly, comprising
a lever, and
a cam;
a second arm assembly mounted on the locking member;
at least one locking plate, mounted on the locking mem-

ber; and

a locking plate release mechanism in communication with the at least one locking plate.

[c17] The removable tub grip of claim 16, further comprising a first spring, mounted on the locking member and in communication with the at least one locking plate, and wherein the first spring urges the at least one locking plate towards the first arm assembly.

[c18] The removable tub grip of claim 17 further comprising a locking surface, wherein the locking surface engages an upper portion of the at least one locking plate and, in combination with the first spring, urges the at least one locking plate to tilt, with respect to the length of the locking member, so that the lower portion of the at least one locking plate moves towards the first arm assembly.

[c19] The removable tub grip of claim 18 wherein the tilting of the locking plate results in the locking plate engaging at least one of the first and second series of teeth of the locking member.

[c20] The removable tub grip of claim 19 wherein each tooth in the first and second series of teeth is defined by a first edge portion and a second edge portion, wherein the first and second edge portion intersect at

the peak of the tooth to form an angle there between.

[c21] The removable tub grip of claim 20 wherein the angle between the first edge portion and the second edge portion is approximately 100 degrees.

[c22] The removable tub grip of claim 21 wherein the characteristic angle of the first edge portion is approximately 70 degrees and the characteristic angle of the second edge portion is approximately 30 degrees.

[c23] The removable tub grip of claim 22 wherein the lever of the clamp mechanism is coupled to the cam; and further wherein actuating the lever urges the first arm assembly towards the second arm assembly.

[c24] The removable tub grip of claim 23 wherein the locking plate release mechanism further comprises:
A release lever, and
a guide wire comprising:
a first end portion, and
a second end portion;
wherein the first end portion is coupled to the release lever and the second end portion is coupled to at least one hook extending from the lower portion of the at least one locking plate.

[c25] The removable tub grip of claim 24 wherein the locking

plate release mechanism is coupled to the second arm assembly and wherein moving the release lever away from the second arm assembly urges the lower portion of the at least one locking plate towards the second arm assembly and disengages the locking plate from the at least one tooth of the locking member.

[c26] A removable tub grip comprising:
a first arm assembly;
a second arm assembly, adjustably coupled to the first arm assembly;
a means for restriction the movement of the second arm assembly away from the first arm assembly;
a means for positioning the second arm with respect to the first arm; and
a mechanical advantage means for applying clamping force on an object positioned between the first and second arm assemblies.

[c27] The removable tub grip of claim 26 wherein the means for restriction the movement of the second arm assembly away from the first arm assembly is a ratcheting means.

[c28] The removable tub grip of claim 27 wherein the ratcheting means comprises a notched bar, in contact on a first end to the first arm assembly and in contact on a second

end to a second arm assembly, and at least one pawl locatable in a notch to restrict movement of the bar with respect to the at least one pawl.

[c29] The removable tub grip of claim 28 further comprising a means for removing the restriction of movement of the second arm assembly away from the first arm assembly.

[c30] The removable tub grip of claim 29 wherein the means for removing restriction of movement of the second arm assembly away from the first arm assembly comprises a release lever and a cord attached, on a first end, to the release lever and attached, on a second end, to the at least one pawl, wherein when the release lever is actuated the cord disengages the at least one pawl from the notch.

[c31] The removable tub grip of claim 30 wherein
the mechanical advantage means comprises a clamp lever coupled to a cam;
wherein the cam is in contact with the first arm assembly, configured in a manner to redirect and multiply a force placed on a portion of the clamp lever distal to the cam to rotate clamp lever; and
further wherein the force used to actuate the clamp lever will be redirected to displace the second arm assembly in a linear manner towards the first arm assembly.

[c32] A method for attaching a tub grip to a bathtub comprising the following steps:
(a)positioning the tub grip such that a first arm assembly is in contact on a first surface of a bathtub wall;
(b)applying force to the second arm assembly to move the second arm assembly into contact with on a second surface of the bathtub wall; and
(c)actuating a lever to urge the second arm assembly towards the first arm assembly to create or increase a clamping force on the bathtub wall.

[c33] A method for detaching a tub grip from a bathtub wall comprising the following steps:
(a)actuating a release lever, coupled to a second arm assembly, to release a locking plate from a ratchet member;
(b)moving the second arm assembly away from contact with a bathtub wall; and
(c)lifting the tub grip away from the bathtub wall.